

CLAIMS

1. A device for selecting an operating mode of an integrated circuit, comprising:

- 5 a non-volatile memory programmable after manufacturing, having, prior to any programming an initial content;
- means for storing a first signature representative of the initial content of the memory;
- means for calculating a second signature representative of a current content of the memory; and
- 10 means for evaluating a difference between the first and second signatures and for deactivating an operating mode selection signal when the difference is greater than a predetermined threshold.

2. The selection device of claim 1, wherein:

- 15 the memory is divided into sub-areas that can each take any one of a plurality of values;
- the first signature comprises a number of initial occurrences of each of the plurality of values in said sub-areas; and
- the second signature comprises a number of current occurrences of each of the plurality of values in said sub-areas.
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3. The selection device of claim 2, wherein the means for evaluating the difference between the first and second signatures calculates the differences between the number of respective occurrences of each of the plurality of values in the first and second signatures and sums the absolute values of the differences.

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4. An integrated circuit comprising a selection device according to claim 1, operating in a first mode as long as the operating mode selection signal is active, and in a second mode otherwise.

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5. The integrated circuit of claim 4, wherein at least part of the memory of the selection device is a memory or a memory area which can only be written into in the first

operating mode.

6. The integrated circuit of claim 4, wherein the second signature is calculated each time the integrated circuit is powered on.

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7. A method for selecting an operating mode of an integrated circuit comprising a non-volatile memory programmable after manufacturing, comprising the steps of:

- upon manufacturing of the integrated circuit, storing a first signature representative of an initial content, prior to any programming, of the memory in a storage means; and

- after manufacturing of the integrated circuit, controllably calculating a second signature representative of a current content of the memory, evaluating a difference between the first and second signatures, and deactivating an operating mode selection signal when the difference is greater than a predetermined threshold.

8. A device for selecting an operating mode of an integrated circuit, comprising:

a non-volatile memory having an initial content after manufacturing;
a storage device for storing a first signature representative of the initial content of the non-volatile memory;

a calculation circuit configured to calculate a second signature representative of a current content of the non-volatile memory; and

a control circuit configured to evaluate a difference between the first and second signatures and to deactivate an operating mode selection signal with the difference is greater than a predetermined threshold.

9. A selection device as defined in claim 8, wherein the operating mode selection signal is deactivated in response to writing a predetermined value into the non-volatile memory.

10. A selection device as defined in claim 8, wherein the non-volatile memory

comprises a ferromagnetic memory.

11. A selection device as defined in claim 8, wherein the first signature is based on a defined sub-area of the non-volatile memory.

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12. A selection device as defined in claim 8, wherein the calculation circuit is configured to calculate the second signature each time the integrated circuit is powered on.

10 13. A selection device as defined in claim 8, wherein writing in the non-volatile memory is prevented when the operating mode selection signal is deactivated.

14. A selection device as defined in claim 8, wherein the non-volatile memory is divided into sub-areas that can each take any of a plurality of values, the first signature
15 comprises a number of initial occurrences of each of the plurality of values in the sub-areas, and the second signature comprises a number of current occurrences of each of the plurality of values in the sub-areas.

15. A selection device as defined in claim 14, wherein the control circuit is
20 configured to calculate the differences between the number of initial occurrences and the number of current occurrences of each of the plurality of values in the first and second signatures and to sum the absolute values of the differences to obtain a value for comparison with the predetermined threshold.

25 16. An integrated circuit comprising:
a non-volatile memory having an initial content after manufacturing;
a mode select device for selecting an operating mode of an integrated circuit, comprising:
a storage device for storing a first signature representative of the initial
30 content of the non-volatile memory;
a calculation circuit configured to calculate a second signature representative of a current content of the non-volatile memory; and

a control circuit configured to evaluate a difference between the first and second signatures and to deactivate an operating mode selection signal when the difference is greater than a predetermined threshold; and

5 a functional block configured to operate in different operating modes according to a state of the operating mode selection signal.

17. An integrated circuit as defined in claim 16, wherein the functional block is configured to operate in a reserved mode in response to an active state of the operating mode selection signal and to operate in a user mode in response to a deactivated state of
10 the operating mode selection signal.

18. An integrated circuit as defined in claim 16, wherein the non-volatile memory is located in the selection device.

15 19. An integrated circuit as defined in claim 16, wherein the non-volatile memory is located in the functional block.

20 20. An integrated circuit as defined in claim 19, wherein the initial content of the non-volatile memory is based on a defined sub-area of the non-volatile memory.

21. An integrated circuit as defined in claim 16, wherein the functional block is configured to prevent writing in the non-volatile memory when the operating mode selection signal is deactivated.

25 22. A method for selecting an operating mode of an integrated circuit, comprising:

providing on the integrated circuit a non-volatile memory having an initial content after manufacturing;

30 storing a first signature representative of the initial content of the non-volatile memory;

calculating a second signature representative of a current content of the non-volatile memory; and

evaluating a difference between the first and second signatures and deactivating an operating mode selection signal when the difference is greater than a predetermined threshold.

5 23. A method as defined in claim 22, further comprising writing a predetermined value into the non-volatile memory to cause the operating mode selection signal to be deactivated.

 24. A method as defined in claim 22, wherein the second signature is
10 calculated each time the integrated circuit is powered on.

 25. A method as defined in claim 22, wherein the non-volatile memory is divided into sub-areas that can each take any of a plurality of values, the first signature comprises a number of initial occurrences of the plurality of values and the second
15 signature comprises a number of current occurrences of each of the plurality of values, wherein evaluating the difference between the first and second signatures comprises calculating the differences between the number of initial occurrences and the number of current occurrences of each of the plurality of values in the first and second signatures and summing the absolute values of the differences to obtain a value for comparison with
20 the predetermined threshold.

 26. A method as defined in claim 23, wherein writing in the non-volatile memory is prevented when the operating mode selection signal is deactivated.